

63-3-2

TM-891/001/OOB

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TECHNICAL MEMORANDUM

(TM Series)

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Combined Milestone 3-4 for the
1604 Augmentation Communication Programs

By

S. Gardner, H. Frieden, R. Wise
W. Derango & D. Biggar

18 February 1963

Approved

J. B. Munson

SYSTEM

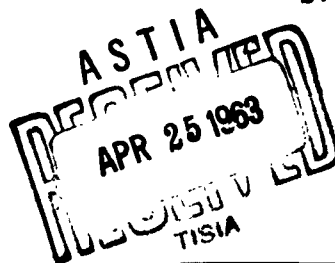
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B

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CURRENT MODIFICATION

Modified Pages

Notes and Filing Instructions

9	Add page 7A.
10	Remove pages 9 and 10 dated 20 December 1962,
11	insert pages 9 and 10 dated 18 February 1963.
	Remove page 11 dated 17 January 1963,
	insert page 11 dated 18 February 1963.
	Remove page 12 dated 20 December 1962,
12	insert pages 12, 12A and 12B dated 18 February
12A	1963.
12B	
15	Remove pages 15 and 16 dated 20 December 1962,
16	insert pages 15 and 16 dated 18 January 1963.
	Add pages 17A, 17B and 17C.
	Add pages 22A, 22B, 22C and 22D.

CULMULATIVE LIST OF MODIFICATIONS

Modified Pages

Modification Number and Date

7A	B (2/18/63)	Addendum
9	B (2/18/63)	New Page
10	B (2/18/63)	New Page
11	B (2/18/63)	New Page
12	B (2/18/63)	New Page
12A	B (2/18/63)	Addendum
12B	B (2/18/63)	Addendum
13	A (1/17/63)	New Page
14	A (1/17/63)	New Page
15	B (2/18/63)	New Page
16	B (2/18/63)	New Page
17A	B (2/18/63)	Addendum
17B	B (2/18/63)	Addendum
17C	B (2/18/63)	Addendum
18	A (1/17/63)	New Page
19	A (1/17/63)	New Page
21	A (1/17/63)	New Page
22	A (1/17/63)	New Page
22A	B (2/18/63)	Addendum
22B	B (2/18/63)	Addendum
22C	B (2/18/63)	Addendum
22D	B (2/18/63)	Addendum

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7A

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VI. ENVIRONMENT

A. Subroutines Used (both in MTCII)

1. TAPEIO
2. INFLEX

B. Tape Units Used

Units 1, 2, 3, 4 on cabinet 2, channels 5/6.

C. Core Storage

450 words program
1190 words storage
Total: 1640 words

The header record is read into the input buffer specified by the "I" (input buffer) parameter and SRDTRK returns to the user program at L+3 with the A-register set to plus one.

Three errors could occur during the initial operation of SRDTRK; a persistent read length error, a persistent parity error, or the data requested could not be found. If an error does occur, an exit is made to L+2 of the user program with an error flag in the Q-register.

Subsequent entries to SRDTRK are made by the user program with calling sequence two. SRDTRK will read a record of the type requested by the "F" parameter. If an end of file is encountered while reading, a flag is set in the A-register and an exit is made to L+2 of the user program. A successful read also returns to L+2 in the user program with a flag in the A-register.

Error returns are made for persistent read length or parity errors. When an "F" parameter of "4" is received, the tape is positioned ready to be written.

IV. INPUT/OUTPUT

A. Input Parameters

The input parameters to SRDTRK are as follows:

F Function defines the operation of SRDTRK. "F" is in the lower opn field of word L.

The values and meanings of "F"

<u>Value</u>	<u>Meaning</u>
0	Find file defined by "S", "V", "R" and read header into "I". If R is zero, find next file defined by "V".

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<u>Value</u>	<u>Meaning</u>
1	Read next Tracking message of present file into "I".
2	Read the next Vehicle Time message of present file into "I".
3	Read the next message of present file into "I".
4	Position tape to end of data. This parameter must be used when the user is through reading the transfer tape.

I Input buffer specifies the starting location of the users input area. "I" is in the lower address of word L.

The "S", "V", "R" parameters are used only with an "F" parameter of zero.

S Site code is the binary site number and is in the upper opn field of word L+1.

V Vehicle number is the 4 Bit - BCD Vehicle Number and is in the upper B-term and M-term fields (18 bits) of L+1.

R Revolution Number is the 4 Bit - BCD Revolution Number in tenths of a revolution and is in the lower instruction step (24 bits) of L+1.

B. Output Parameters

SRDTRK returns to the user program with the error codes in the Q-register or normal codes in the A-register.

1. Error Codes

Q = -2	read length error
Q = -1	read parity error
Q = 1	cannot find data requested

2. Normal Codes

A = 0	message read
A = 1	header read
A = 2	no more data (EOF found)

C. Bird Buffer - 160⁴ Transfer Tape

The Bird Buffer - 160⁴ Transfer Tape is a multiple file tape containing Headers, Tracking Messages, and Vehicle Time messages concerning any number of vehicles in any order.

Each set of data concerning a given Vehicle, Station, Revolution is a file and this file is begun by a Header record. All Messages and Headers are eight word records.

The tape is ended by two end of file marks.

See TM-(L)-834/000/01 for message formats.

V. ENVIRONMENT

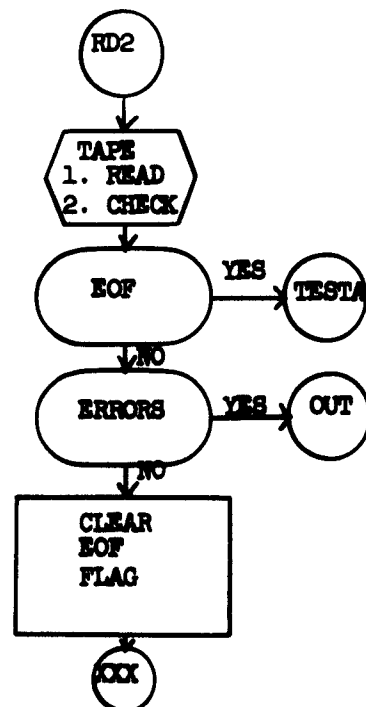
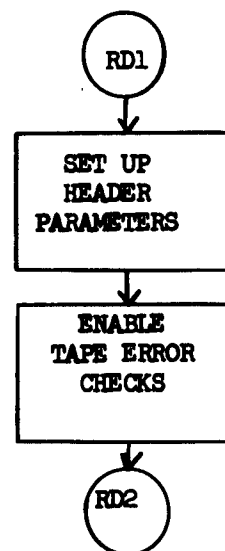
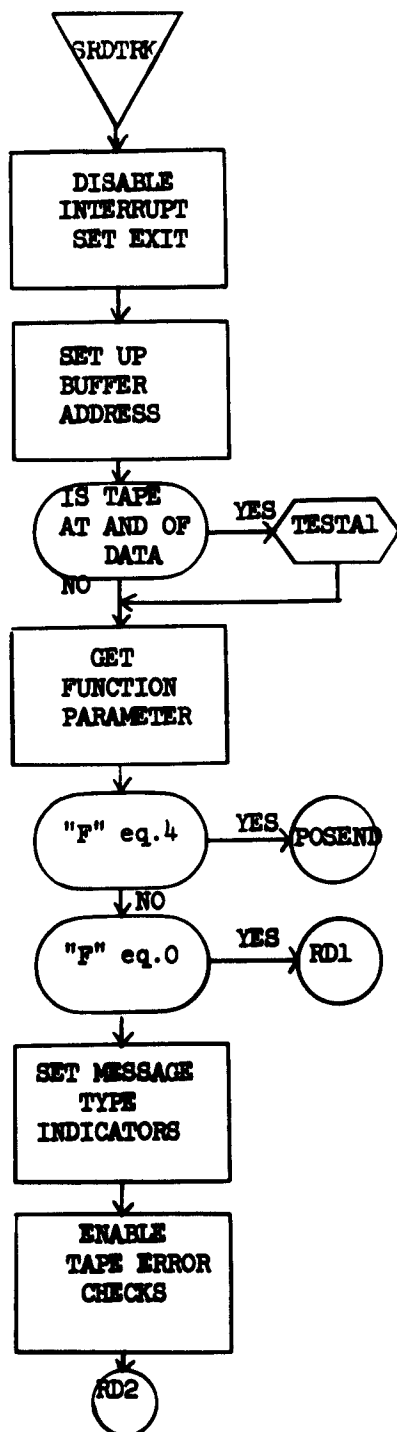
- A. SRDTRK uses tape 19, unit 4, cabinet 2, channel 5/6.
- B. SRDTRK uses TAPE.
- C. SRDTRK uses 140₈ cells.

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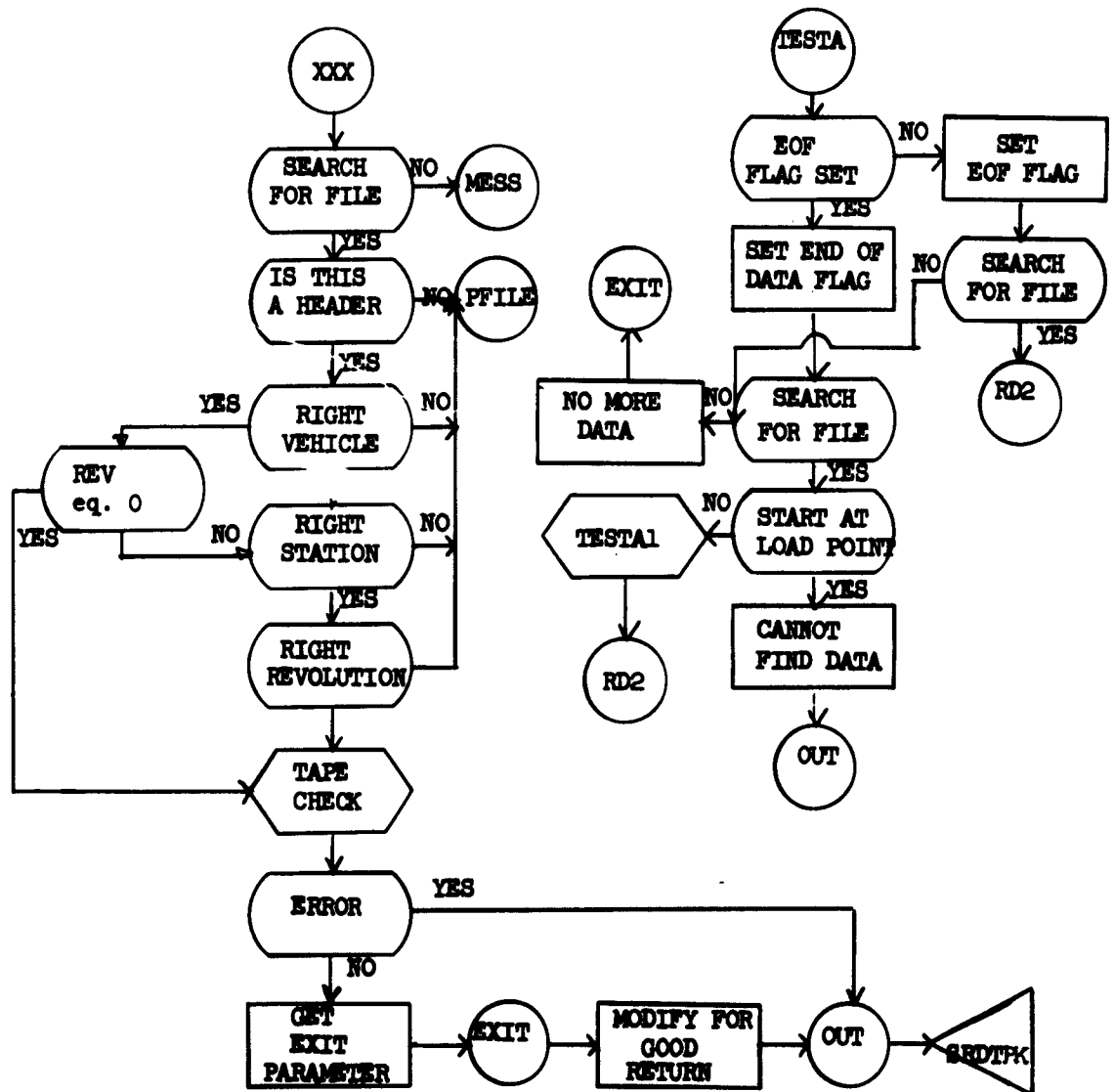
FLOW DIAGRAM



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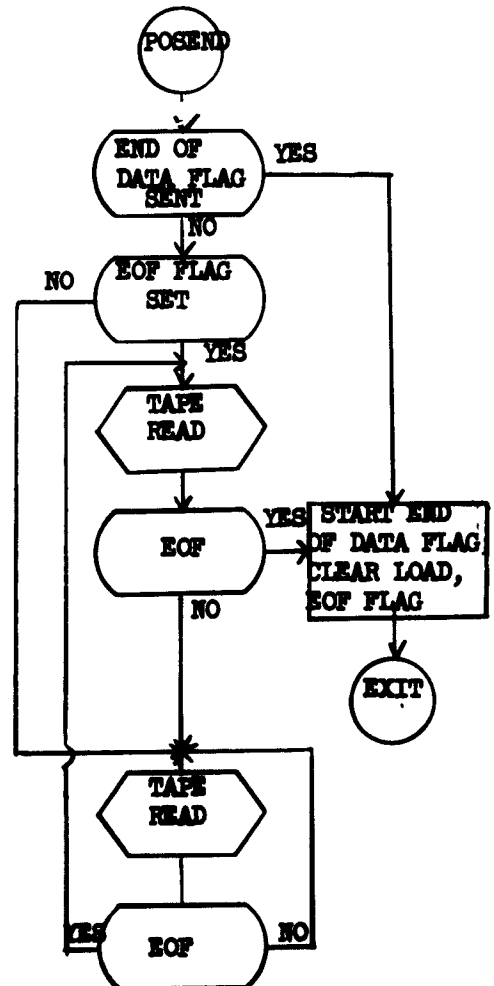
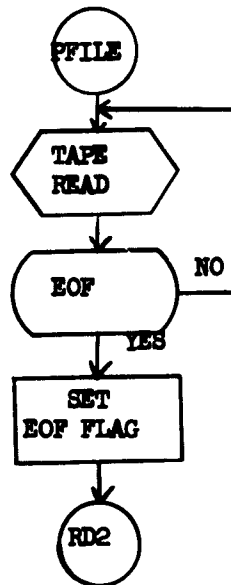
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2. "B" is the starting location of the input message block and occupies the lower address field of word L (15 bits only).

B. Message Blocks

A message block is defined as a set of one or more messages of the same type. Message blocks cannot exceed 511 words. All messages must begin left justified in a 160⁴ word and must be made an integral number of 160⁴ words by insertion of trailing zeros.

The formats of the individual messages are described in references A and B.

A header message must precede a set of message blocks for a given Vehicle, Station, and Revolution.

C. On-Line Messages

SWRTOUT has two messages, both are printed on the on-line 1612.

1. PLEASE MOUNT WRITE TAPE FOR SWRTOUT ON TAPE 18, AND HIT START.
2. UNRECOVERABLE ERROR ON SWRTOUT - MOUNT NEW TAPE 18 AND REINITIATE PREVIOUS FUNCTION . . .

Message 1 occurs the first time SWRTOUT is entered.

Message 2 occurs if there is persistent write parity or write length error, the change tape is too short or a commanding message cannot be verified. SWRTOUT will halt after this message instead of taking an error return.

The error return is no longer used by SWRTOUT, but must remain in the calling sequence as SWRTOUT returns to L+2 for a normal return.

D. Change Tape

The Change Tape is an intermediate tape produced by SWRTOUT for the use of SMERGE.

It is a single file tape, each record is a message block. Message blocks concerning a given Vehicle, Station, Revolution are separated by a header record specifying the Vehicle, Station and Revolution. Maximum record size is 512 words.

CHANGE TAPE FORMAT

Header	$V_1 R_j S_k$
BLOCK	$A (V_1 R_j S_k)$
BLOCK	$B (\quad " \quad)$
BLOCK	$C (\quad " \quad)$
Header	$V_1 R_m S_n$
BLOCK	$B (V_1 R_m S_n)$
Header	$V_o R_p S_q$
BLOCK	$A (V_o R_p S_q)$
BLOCK	$B (\quad " \quad)$
BLOCK	$A (\quad " \quad)$
EOF	

V. ENVIRONMENT

A. Subroutines used

1. TAPE
2. SMERGE (successor function)

B. Tape Units used

Unit 3 on cabinet 2, channels 5/6

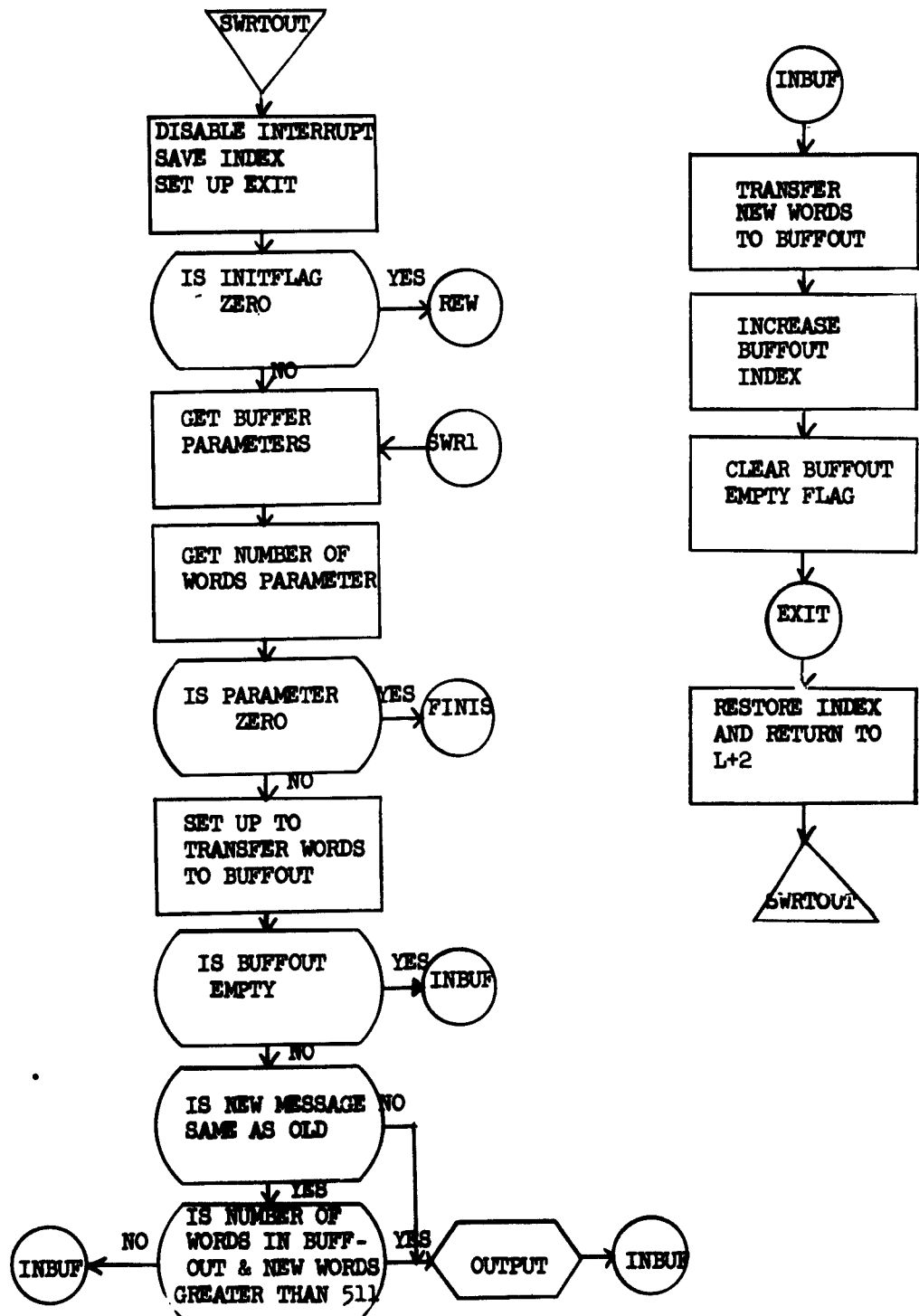
C. Core Storage

525 words storage
<u>475 words program</u>
Total: 1000 words

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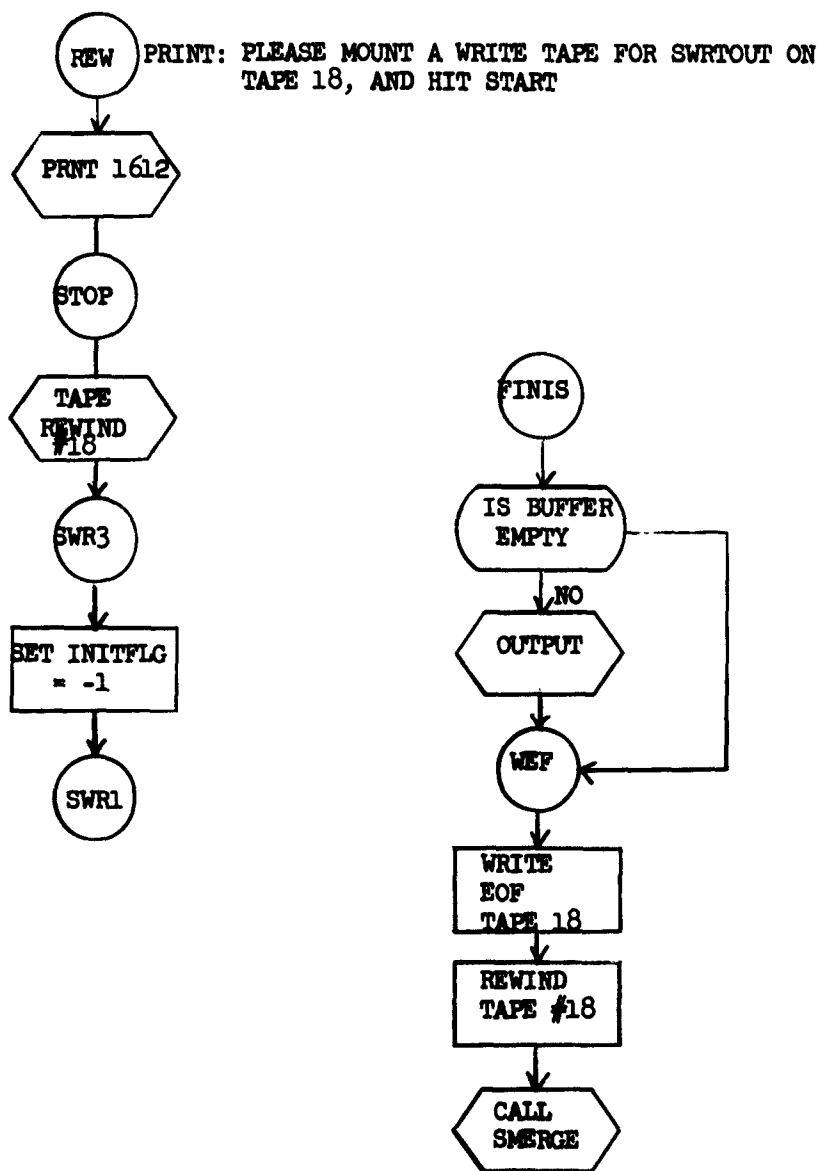
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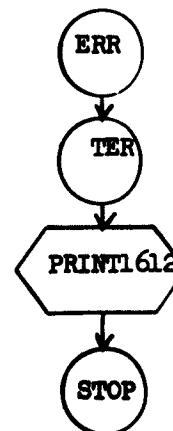
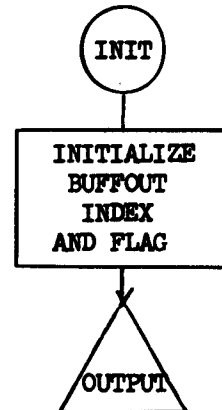
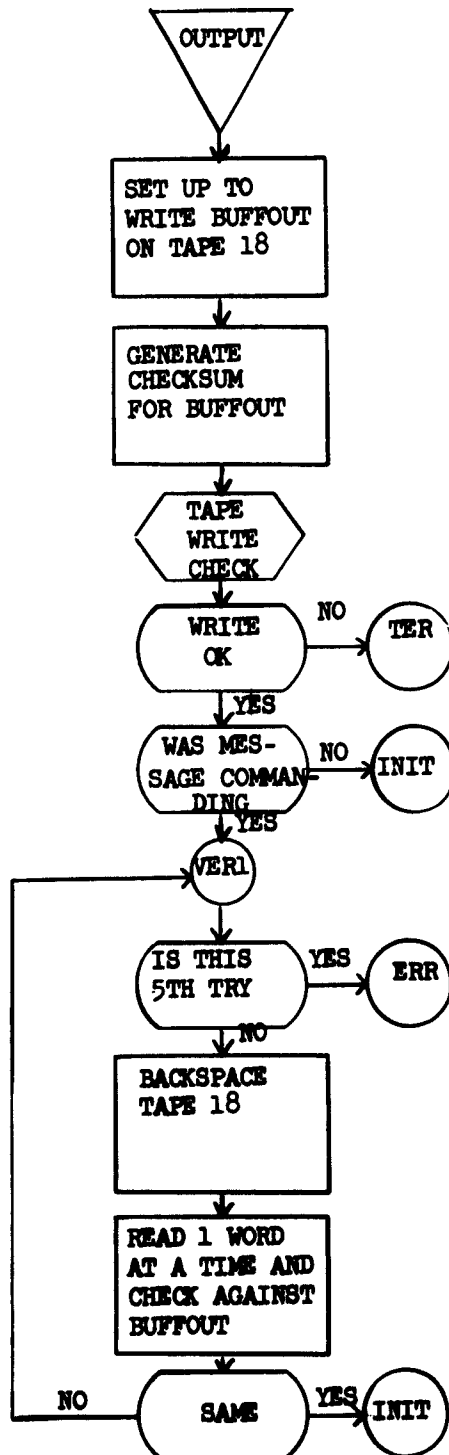
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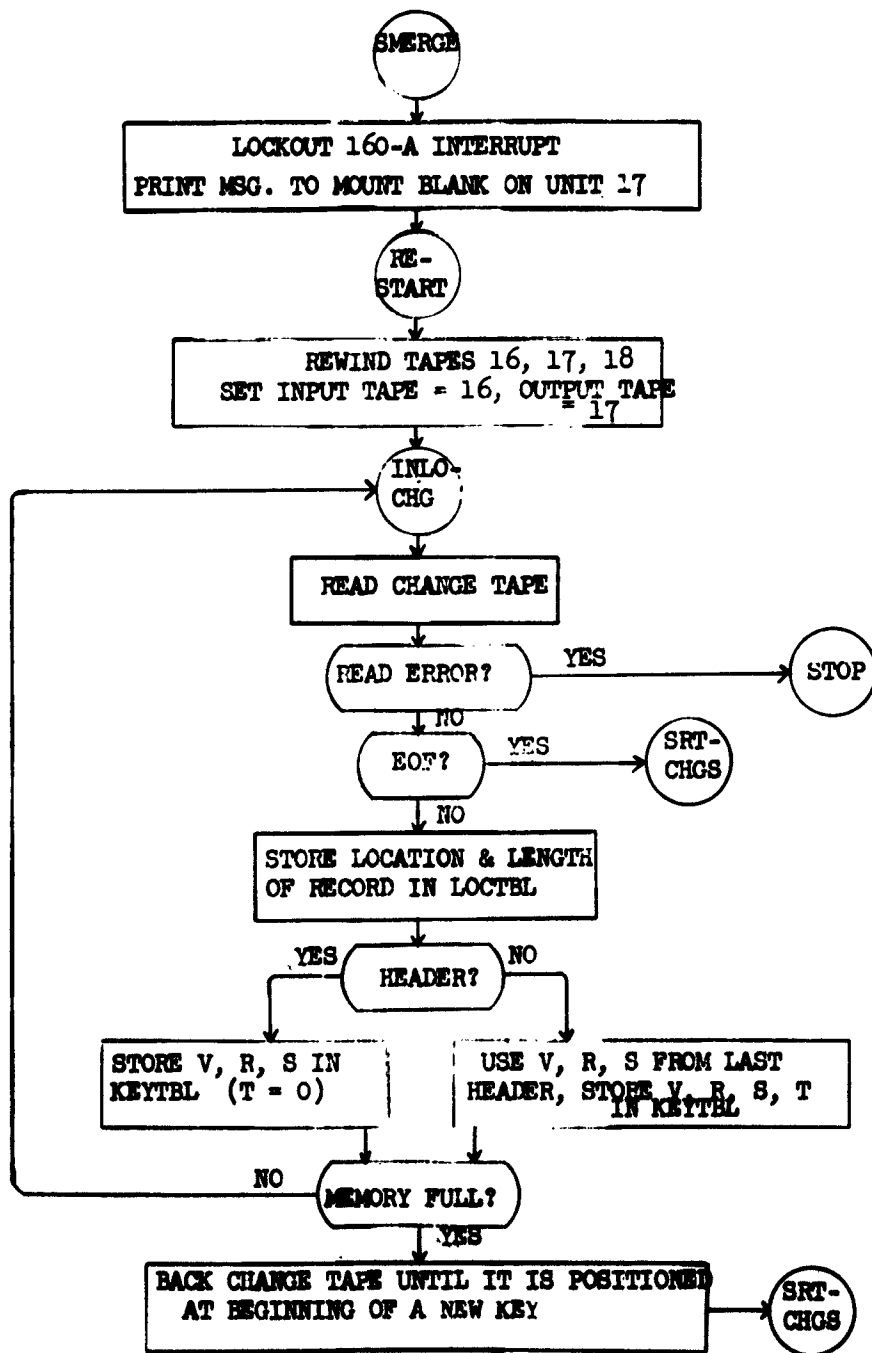


PRINT: UNRECOVERABLE ERROR IN SWRTOUT - MOUNT NEW TAPE 18 AND REINITIATE PREVIOUS FUNCTION. .

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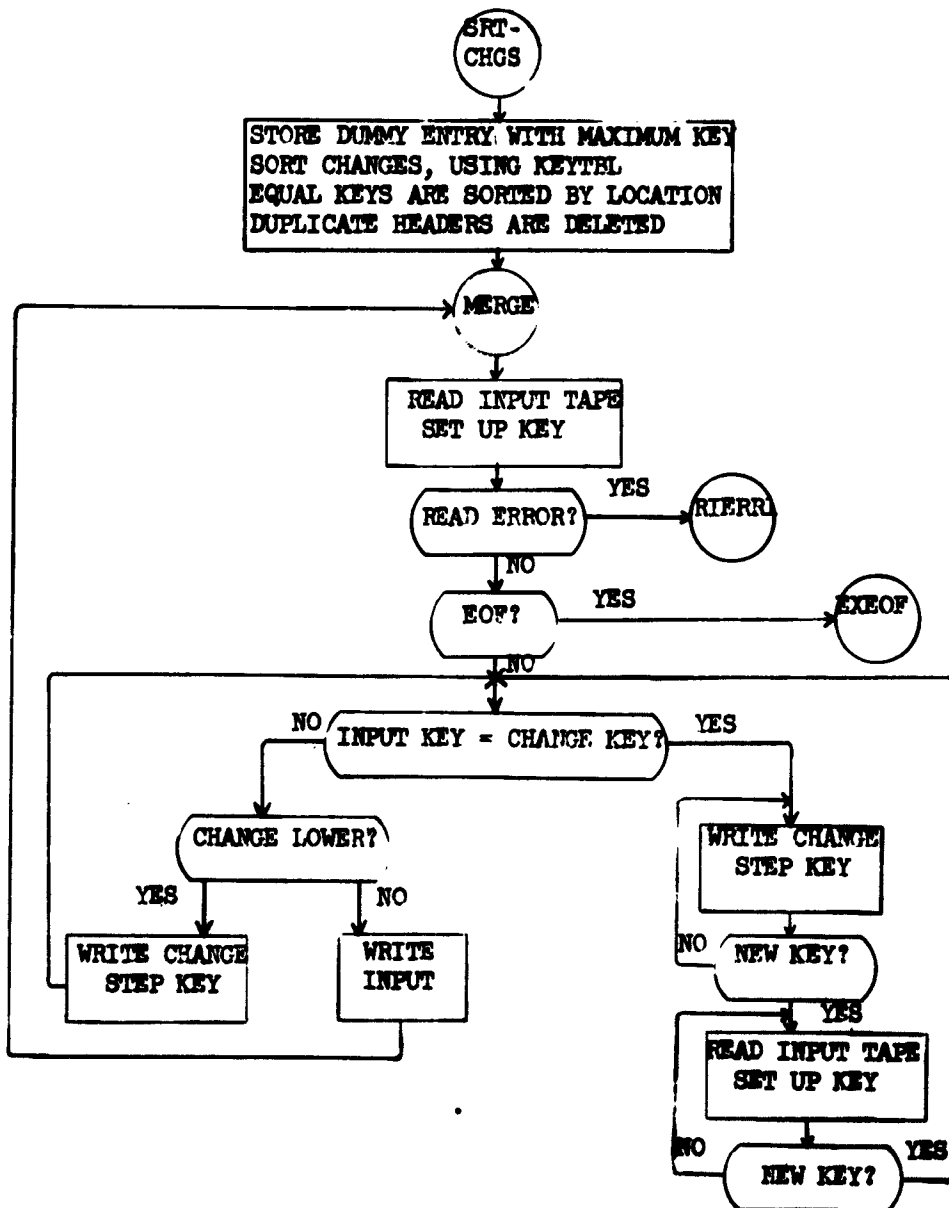
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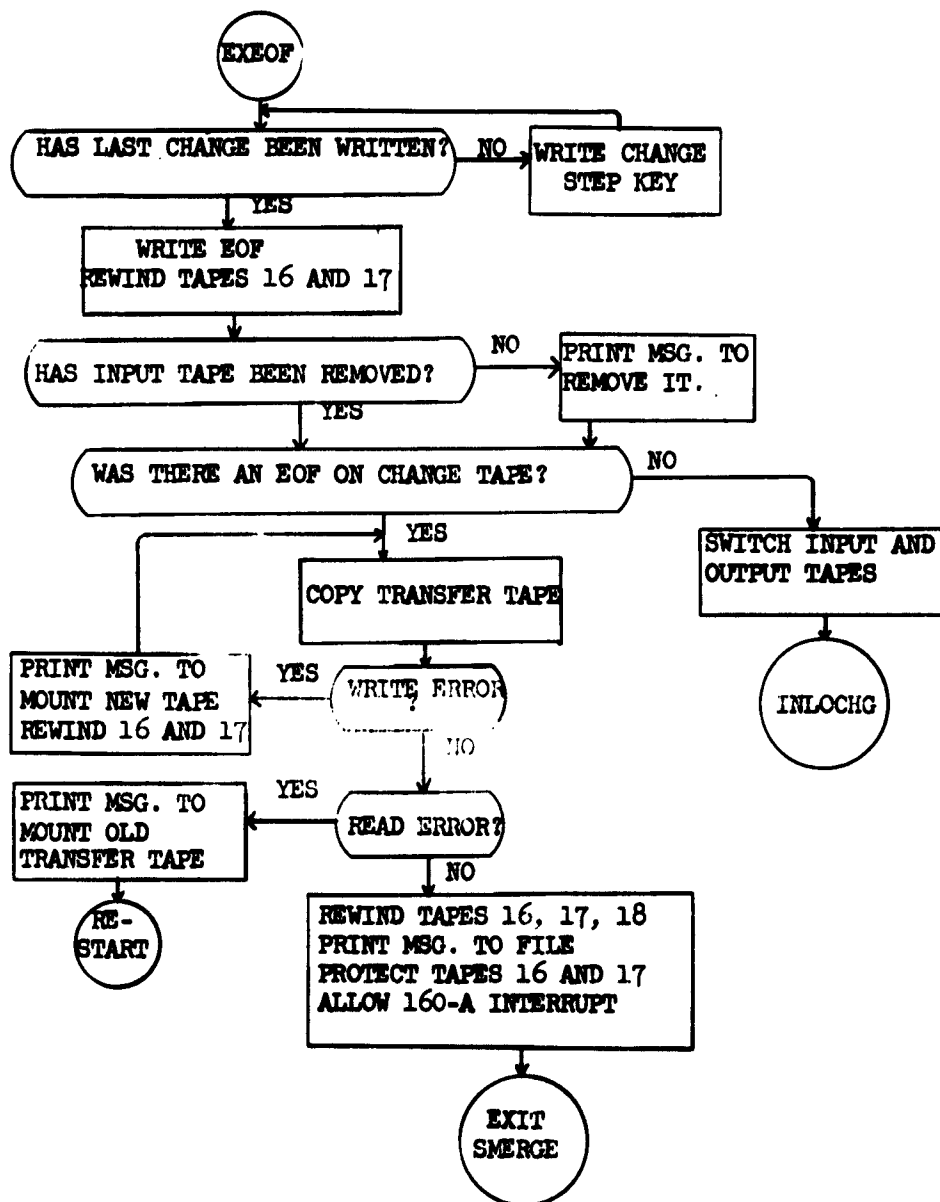
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-22C-

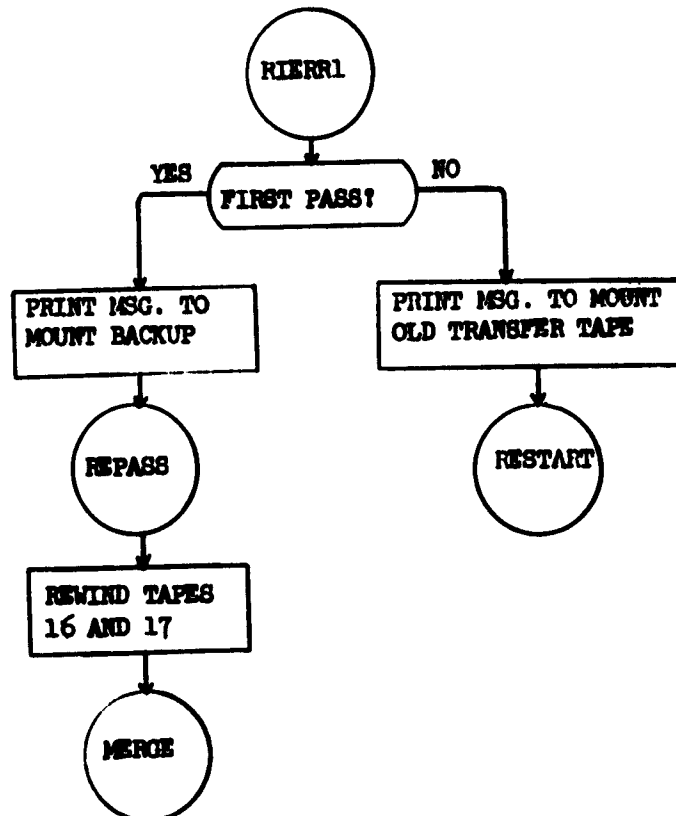
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Wilson, G. D.	22101	Winter, J. E.	24097
Winsor, M. E.	24137	Wise, R. C.	24051
		Wong, J. P.	Sunnyvale

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Alexander L. B.	22083	Keyes, R. A.	20073
Alperin, N. I.	24118A	Kneemeyer, J. A.	24065A
Armstrong, E.	24089	Knight, R. D.	24110B
Biggar, D.	24090B	Knight, R. W.	22095
Bilek, R. W.	24124	Kolbo, L. A.	24139
Brenton, L.	22070	Laughlin, J. L.	20073
Busch, R. E.	24065B	LaVine, J.	20079
Bustya, C.	22084	Little, J. L.	20077
Champaign, M. E.	24127B	Long, F.	24122
Chesler, D. J.	22087	Lytton, J. G.	24082B
Ciaccia, B.	24082A	Marioni, J. D.	24076B
Clements, R. F.	24132	Martin, W. P.	24089
Cogley, J. L.	24135	McKeown, J.	24121
Cline, B. J.	24097	Milanese, J. J.	24121
Cooley, P. R.	24083	Munson, J. B.	24048
Crum, D. W.	24093	Myers, G. L.	14056A
DeCuir, L. E.	22096A	Ngou, L.	25030
Derango, W. C.	24077	Olson, M. M.	24124
Dexter, G. W.	24128	Padgett, L. A.	24085
Disse, R. J.	24139	Patin, O. E.	Sunnyvale
Dobbs, G. H.	24094B	Polk, R. W.	24099
Dobrusky, W. B.	22125	Reilly, D.	24085
Dugas, R.	24105	Rothman, S.	22116A
Ellis, R. C.	24081	Scott, R. J.	24093
Ericksen, S. R.	24110A	Seacat, C. M.	Sunnyvale
Francis, C. W.	20075	Seiden, H. R.	22091A
Franks, M. A.	25030	Shapiro, R. S.	25026
Friedman, L. A.	22083	Shoel, S. J.	24123
Gale, B.	22124	Skelton, R. H.	24127A
Gergen, V. J.	24109	Speer, N. J.	22116B
Greenwald, I. D.	24058B	Stone, E. S.	22116B
Haake, J. W.	24120	Sweeney, M. J.	24057
Henley, D. E.	24058A	Tennant, T. C.	27024
Hill, C. L.	24057	Thompson, J. W.	22077
Holzman, H. J.	22096B	Totschek, R. A.	24090A
Hudson, G. R.	22101	Tucker, A. E.	24115
Johnson, R. E.	24105	Weems, S.	24115
Kastama, P. T.	24053	Weinstock, M.	22095
Katz, M.	24109	West, G. D.	24117
Kayser, F. M.	25026	West, G. P.	24094A
Keddy, J. R.	25026	Williams, H. D.	24091

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